



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/677,133

10/01/2003

Daniel Wozniak

1033-SS00423

3897

60533

7590

10/28/2008

TOLER LAW GROUP
8500 BLUFFSTONE COVE
SUITE A201
AUSTIN, TX 78759

EXAMINER

PHAM, MICHAEL

ART UNIT

PAPER NUMBER

2167

MAIL DATE

DELIVERY MODE

10/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/677,133	Applicant(s) WOZNIAK ET AL.	
	Examiner MICHAEL PHAM	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-19, 21-23 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-19, 21-23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Claim Status

1. Claims 1-8, 11-19, 21-23, and 25-27 are pending.
2. Claims 1-8, 11-19, 21-23, and 25-27 have been examined.

Claim Objections

3. Prior objections to specification regarding “network element” is withdrawn.

Claim Rejections - 35 USC § 101

4. Claims 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106.01:

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Claim 11 recites “a system”. However claim 11 fails to contain any computer hardware that is used to implement the system so as to realize the functionality. Contrary to arguments made by some applicants, use of the word “system” does not inherently mean that the claim is directed to a machine. Only if at least one of the claimed elements of the system is a physical part of a device can the system as claimed constitute part of a device or a combination of devices to be a machine within the meaning of 101. Furthermore, the network element, the first utility (specifications page 5 0021), and SMS simulator (specifications 0014, page 3) all appear to be software per se. Regarding a server including the SMS simulator, the server provided in paragraph 0014, provides that the server comprises two identical Win32 executables to perform SMS simulation and functionality to capture eXtensible Markup Language (XML) Application Program Interface commands. Therefore, the server appears to be software per se.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 3, 4, 7-8, 11, 13-14, 17-18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6938039 by Bober et. al. (hereafter Bober) further in view of US Patent Application Publication 20040088417 by Bober et. al. (hereafter ‘417).**

Claim 1:

Bober discloses the following claimed limitations:

“Directing each of the plurality of” “requests to an SMS simulator instead of to the first SMS or the second SMS;”[col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. Accordingly, directing (col. 2 lines 49-51, directing) each of the plurality of requests (col. 2 lines 49-51, requests) to an SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes) instead of to the first SMS (col. 2 lines 49-52, source server) is disclosed]

“For each syntactically correct request:

Assigning, via the SMS simulator, a corresponding simulated” “component identifier associated with the” “request;”[col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. col. 2 lines 42-43, the target file server responding to client read/write requests for access to the file system. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. Accordingly, for each syntactically correct request (col. 2 lines 42-43, requests): assigning, via the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a corresponding simulated component identifier (col. 7 lines 15-18, creating offline inodes of the

Art Unit: 2167

file system) associated with the request (col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) is disclosed]

“Storing, a command associated with the” “request and its associated simulated”
”component identifier in a first transaction file; and” [col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. Col. 7 lines 55-57, the online and offline nodes each have a flag indicating whether or not the node is an online or an offline node. Accordingly, storing, a command (flag) associated with the request (col. 2 lines 58-63, ...requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) and its associated simulated component identifier in a first transaction file (col. 7 lines 15-18, creating offline inodes of the file system) is disclosed.]

“Sending, from the SMS simulator, a” “response based on the” “request;”
[Accordingly, sending, from the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a response based on the request (col. 5 line 67-col. 6 lines 1-2, target file server obtains the requested object from the source file server) is disclosed]

“”first transaction file to the second SMS;” [Accordingly, the first transaction file (figure 3 element 61, offline node) to the second SMS (Target file server online node) is disclosed]

“Receiving a corresponding response from the second SMS in response” data
“transferred from the SMS simulator to the second SMS; and”[col. 7 lines 23-25 after converting

Art Unit: 2167

an offline inode to a conventional inode the migration software tests whether the counter is zero to determine whether or not migration of the file system has been completed. Accordingly, receiving a corresponding response (test counter) from the second SMS (Target server using online) is disclosed.]

“Determining whether each response from the second SMS matches the corresponding”
“response sent by the SMS simulator.”[col. 7 lines 23-25, after converting an offline inode to a conventional inode the migration software tests whether the counter is zero to determine whether or not migration of the file system has been completed. Accordingly, determining whether each response from the second SMS matches the corresponding response sent by the SMS simulator (counter is zero)]

Bobber does not explicitly disclose “provisioning”; “transferring each of the provisioning requests having an associated simulated provisioning component identifier”; and “to each provisioning request transferred”

On the other hand, ‘417 discloses 0053 line 1 provisioning requests. 0033 line 7, further disclosing provisioning requests can specifically identify. 0033 line 3 discloses provision a computer system in response to a provisioning request. Accordingly, a provisioning request, a provisioning component identifier, and a provisioning response based on the provisioning request, is disclosed.

‘417 further discloses 0053 lines that the provisioning request can be created in an essentially entirely automated fashion by reverse engineering a current computer system configuration that is desired to be replicated. It may be desirable to replicate an existing computer system configuration for any of number of reasons. One particularly application in which replication may be desirable is when a data migration is being performed from one storage system to another. 0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request. 0033 line 7, further disclosing provisioning requests can specifically identify. Accordingly, transferring each of the provisioning requests (provisions a computer system) having an associated simulated provisioning component identifier (specifically identify) is disclosed.

‘417 further discloses 0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request. Accordingly, provisioning request transferred (provisions a computer system) is disclosed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of ‘417 to the disclosure of Bober for the purpose of data migration. In ‘417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Claim 3:

As to “replacing SMS-simulator-generated provisioning information in a database with provisioning information associated with the second SMS”

Bober discloses in the abstract lines 19-20 “replacing SMS-simulator-generated information in a database with information associated with the second SMS.” as changes (replacing) the offline node for the object (SMS-simulator generated provisioning information in a database with) to an online node for the object (information associated with the second SMS).

Bober does not explicitly disclose “provisioning”.

On the other hand, 417 discloses figure 3 elements 210-214, specifications for provisioning.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of ‘417 to the disclosure of Bober for the purpose of data migration. In ‘417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Claim 4:

The combination of Bober and '417 discloses in Bober “replacing each SMS-simulator-generated component identifier in the database with a corresponding component identifier associated with the second SMS.” as placing data block references in the migration inode, and converting the offline inode to an online inode by overwriting the off-line node with the migration inode (replacing each). Figure 5 element 73, migration inode pointer (SMS-simulator generated component identifier in the database). Figure 5 element 65, data Block references (with a corresponding component identifier associated with the second SMS)

Claim 7:

Bober discloses the following claimed limitations:

“Directing a subsequent” request to the SMS simulator;” [col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. Accordingly, directing (col. 2 lines 49-51, directing) a subsequent request (col. 2 lines 49-51, requests) to an SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes) is disclosed]

“Assigning, via the SMS simulator, a” “component identifier associated with the subsequent” “request;” [col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. col. 2 lines 42-43, the target file server responding to client read/write requests for access to the file system. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. col. 2

Art Unit: 2167

lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. Accordingly, assigning, via the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a component identifier (col. 7 lines 15-18, creating offline inodes of the file system) associated with the subsequent request (col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) is disclosed]

“Storing a command associated with the subsequent” “request and its associated” “component identifier in a second transaction file; and” [col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. Col. 7 lines 55-57, the online and offline nodes each have a flag indicating whether or not the node is an online or an offline node. Accordingly, storing a command (flag) associated with the subsequent request (col. 2 lines 58-63, ...requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) and its associated component identifier in a second transaction file (col. 7 lines 15-18, creating offline inodes of the file system) is disclosed.]

“Sending, via the SMS simulator, a subsequent” “response based on the subsequent” “request.” [Accordingly, sending, via the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a subsequent response based on the subsequent request (col. 5

Art Unit: 2167

line 67-col. 6 lines 1-2, target file server obtains the requested object from the source file server) is disclosed]

However Bober does not explicitly disclose “provisioning”.

On the other hand, ‘417 discloses 0053 line 1 provisioning requests. 0033 line 7, further disclosing provisioning requests can specifically identify. 0033 line 3 discloses provision a computer system in response to a provisioning request. Accordingly, a provisioning request, a provisioning component identifier, and a provisioning response based on the provisioning request, is disclosed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of ‘417 to the disclosure of Bober for the purpose of data migration. In ‘417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Claim 8:

The combination of Bober and ‘417 discloses in ‘417 “transferring the subsequent provisioning request in the second transaction file to the second SMS.” ‘ [0053 lines that the provisioning

Art Unit: 2167

request can be created in an essentially entirely automated fashion by reverse engineering a current computer system configuration that is desired to be replicated. It may be desirable to replicate an existing computer system configuration for any of number of reasons. One particularly application in which replication may be desirable is when a data migration is being performed from one storage system to another. 0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request. 0033 line 7, further disclosing provisioning requests can specifically identify. Accordingly, transferring the subsequent provisioning requests in the second transaction file (provisions a second computer system) to the second SMS (a computer system).]

Claim 11:

Bober discloses the following claimed limitations:

“a server including an SMS simulator”[col. 2 lines 49-52 and lines 56-58, target server using offline nodes]

“A network element to redirect each of the plurality of” “requests to an SMS simulator instead of a first SMS or the second SMS; “[col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. Accordingly, a network element to redirect (col. 2 lines 49-51, directing) each of the plurality of requests (col. 2 lines 49-51, requests) to an SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes) instead of to the first SMS (col. 2 lines 49-52, source server) is disclosed]

“The SMS simulator to:

Assign a corresponding simulated provisioning component identifier associated with each of the plurality of provisioning requests;” [col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. col. 2 lines 42-43, the target file server responding to client read/write requests for access to the file system. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. Accordingly, the SMS simulator to assigning (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a corresponding simulated component identifier (col. 7 lines 15-18, creating offline inodes of the file system) associated with the request (col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) is disclosed]

“Store a command associated with each provisioning request and its associated simulated provisioning component identifier in a first transaction file; and” [col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. Col. 7 lines 55-57, the online and offline nodes each have a flag indicating whether or not the node is an online or an offline node. Accordingly, store a command

(flag) associated with the request (col. 2 lines 58-63, ...requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) and its associated simulated component identifier in a first transaction file (col. 7 lines 15-18, creating offline inodes of the file system) is disclosed.]

“Send a corresponding provisioning response based on each of the plurality of provisioning requests; and” [Accordingly, sending, from the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a response based on the request (col. 5 line 67-col. 6 lines 1-2, target file server obtains the requested object from the source file server) is disclosed]

“A first utility to:”

“in the first transaction file to a second SMS;” [Accordingly, the first transaction file (figure 3 element 61, offline node) to the second SMS (Target file server online node) is disclosed]

“Receive a response from the second SMS; and” [col. 7 lines 23-25 after converting an offline inode to a conventional inode the migration software tests whether the counter is zero to determine whether or not migration of the file system has been completed. Accordingly, receiving a corresponding response (test counter) from the second SMS (Target server using online) is disclosed.]

“Determine whether each response received from the second SMS matches the corresponding provisioning response sent by the SMS simulator.” [col. 7 lines 23-25, after converting an offline inode to a conventional inode the migration software tests whether the counter is zero to determine whether or not migration of the file system has been completed.

Art Unit: 2167

Accordingly, determining whether each response from the second SMS matches the corresponding response sent by the SMS simulator (counter is zero)]

Bober does not explicitly disclose “provisioning”; “transfer each of the provisioning requests having an associated simulated provisioning component identifier ”; and “for each of the plurality of provisioning requests transferred”

On the other hand, ‘417 discloses 0053 line 1 provisioning requests. 0033 line 7, further disclosing provisioning requests can specifically identify. 0033 line 3 discloses provision a computer system in response to a provisioning request. Accordingly, a provisioning request, a provisioning component identifier, and a provisioning response based on the provisioning request, is disclosed.

‘417 further discloses 0053 lines that the provisioning request can be created in an essentially entirely automated fashion by reverse engineering a current computer system configuration that is desired to be replicated. It may be desirable to replicate an existing computer system configuration for any of number of reasons. One particularly application in which replication may be desirable is when a data migration is being performed from one storage system to another. 0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request. 0033 line 7, further disclosing provisioning requests can specifically identify. Accordingly, transferring each of the

Art Unit: 2167

provisioning requests (provisions a computer system) having an associated simulated provisioning component identifier (specifically identify) is disclosed.

‘417 further discloses 0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request. Accordingly, for each of the plurality of provisioning request transferred (provisions a computer system) is disclosed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of ‘417 to the disclosure of Bober for the purpose of data migration. In ‘417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Claim 13:

As per "to replace SMS-simulator-generated provisioning information in a database with provisioning information for the second SMS."

Bober discloses in the abstract lines 19-20 "to replace SMS-simulator-generated" "information" "in a database with" "information associated with the second SMS." as changes

Art Unit: 2167

(replacing) the offline node for the object (SMS-simulator generated provisioning information in a database with) to an online node for the object (information associated with the second SMS).

Bober does not explicitly disclose “provisioning”.

On the other hand, 417 discloses figure 3 elements 210-214, specifications for provisioning.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of ‘417 to the disclosure of Bober for the purpose of data migration. In ‘417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Claim 14:

As per “to replace the SMS-simulator-generated component identifiers in the database with corresponding provisioning component identifiers of the second SMS.”

The combination of Bober and ‘417 therefore discloses in Bober “to replace the SMS-simulator-generated component identifiers in the database with a corresponding component identifier associated with the second SMS.” as placing data block references in the migration

Art Unit: 2167

inode, and converting the offline inode to an online inode by overwriting the off-line node with the migration inode (replacing each). Figure 5 element 73, migration inode pointer (SMS-simulator generated component identifier in the database). Figure 5 element 65, data Block references (with a corresponding component identifier associated with the second SMS)

The combination of Bober and '417 discloses in '417 provisioning, 0053 line 1.

Claim 17:

Bober discloses:

“Assign a corresponding” “component identifier associated with the subsequent” “request;” [col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. col. 2 lines 42-43, the target file server responding to client read/write requests for access to the file system. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. Accordingly, assigning, via the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a component identifier (col. 7 lines 15-18, creating offline inodes of the file system) associated with the subsequent request (col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) is disclosed]

“store a command associated with the subsequent” “request and its associated”
“component identifier in a second transaction file; and” [col. 2 lines 58-63, requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes. col. 7 lines 15-18, the target server performs migration by creating offline inodes of the file system being migrated, and converting the offline inodes to a conventional inode. Col. 7 lines 55-57, the online and offline nodes each have a flag indicating whether or not the node is an online or an offline node. Accordingly, storing a command (flag) associated with the subsequent request (col. 2 lines 58-63, ...requests to source file server in accordance with a network file access protocol to transfer the file system objects represented by the offline nodes) and its associated component identifier in a second transaction file (col. 7 lines 15-18, creating offline inodes of the file system) is disclosed.]

“Send a corresponding” “response based on the subsequent” “request.” [Accordingly, sending, via the SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes), a subsequent response based on the subsequent request (col. 5 line 67-col. 6 lines 1-2, target file server obtains the requested object from the source file server) is disclosed]

However Bober does not explicitly disclose “provisioning”.

On the other hand, ‘417 discloses 0053 line 1 provisioning requests. 0033 line 7, further disclosing provisioning requests can specifically identify. 0033 line 3 discloses provision a computer system in response to a provisioning request. Accordingly, a provisioning request, a

Art Unit: 2167

provisioning component identifier, and a provisioning response based on the provisioning request, is disclosed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of '417 to the disclosure of Bober for the purpose of data migration. In '417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Claim 18:

The combination of Bober and '417 further disclose in '417 "to replay the subsequent provisioning request in the second transaction file to the second SMS." [0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request.]

Claim 21:

The combination of Bober and '417 further disclose in '417, "identifying a particular provisioning request as unsuccessful when the response received from the second SMS to the corresponding provisioning request does not match the corresponding provisioning response sent

Art Unit: 2167

by the SMS simulator.” [0071, an error message is returned indicating that the provisioning request cannot be satisfied as specified.]

Claim 22:

The combination of Bober and ‘417 further disclose in ‘417, “generating an error log of unsuccessful provisioning requests.” [0071, an error message is returned indicating that the provisioning request cannot be satisfied as specified.]

Claim 23:

The combination of Bober and ‘417 disclose in ‘417 “identifies a particular provisioning request as unsuccessful when the response received from the second SMS to the corresponding provisioning request does not match the corresponding provisioning response sent by the SMS simulator.” [0071, an error message is returned indicating that the provisioning request cannot be satisfied as specified.]

7. Claims 2, 5, 12, 15, 19, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6938039 by Bober et. al. (hereafter Bober) and US Patent Application Publication 20040088417 by Bober et. al. (hereafter ‘417) further in view of US Patent Application Publication 20030069903 by Gupta et. al. (hereafter Gupta).

Claim 2:

As to “directing subsequent provisioning requests to the second SMS instead of to the SMS simulator upon determining that no provisioning requests are made within a transaction-file-replay time period.”

Art Unit: 2167

The combination of Bober and '417 disclose in Bober directing "subsequent" "requests to the SMS instead of to the SMS simulator upon determining that no" "requests are made" [abstract, when an object has been completely migrated, the target file server changes the offline node for the object to an online node for the object.].

The combination of Bober and '417 disclose in '417 "provisioning requests" [0053 line 1 provisioning requests].

However, Bober and '417 do not explicitly disclose "within a transaction-file-replay time period."

On the other hand, Gupta discloses 0037, logged transactions are executed on the target server. Accordingly, a transaction-file replay time period (logged transactions executed) is disclosed.

Bobber, '417, and Gupta are all directed to data migration systems, and thus within the same field of endeavor. It would have been obvious to have applied Gupta's disclosure above to the combination of Bobber and '417, for the purpose of allowing synchronization of later updates of a file system.

Claim 5:

As to "replacing the SMS-simulator-generated provisioning time information with corresponding provisioning time information associated with the second SMS."

Art Unit: 2167

The combination of Bober and '417 disclose in Bober replacing the SMS-simulator-generated information with corresponding information associated with the second SMS [target server changes the offline node for the object to an online node for the object].

The combination of Bober and '417 disclose in '417 provisioning information [0053 line 1 provisioning requests].

However, Bober and '417 do not explicitly disclose time information.

On the other hand, Gupta discloses 0038 line 7, an update stage at ever decreasing time intervals.

Bobber, '417, and Gupta are all directed to data migration systems, and thus within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied Gupta's disclosure above to the combination of Bobber and '417, for the purpose maintaining time information in order to track updates. Thus, maintaining synchronization.

Claim 12:

As to "wherein the network element is to direct subsequent provisioning requests to the second SMS instead of the SMS simulator upon determining that no subsequent provisioning requests are made within a transaction-file-replay time period, and wherein each of the plurality of provisioning requests are syntactically correct."

Art Unit: 2167

The combination of Bober and '417 disclose in Bober

“network element is to direct subsequent” “requests to the second SMS instead of the SMS simulator upon determining no subsequent” “requests are made” [abstract, when an object has been completely migrated, the target file server changes the offline node for the object to an online node for the object.]

“wherein each of the plurality of” “requests are syntactically correct” [col. 2 lines 42-43, requests]

The combination of Bober and '417 disclose in '417 “provisioning request” [0053 line 1 provisioning requests].

However the combination of Bober and '417 do not explicitly disclose “within transaction-file-replay time period”

On the other hand, Gupta discloses 0037, logged transactions are executed on the target server. Accordingly, a transaction-file replay time period (logged transactions executed) is disclosed.

Bobber, '417, and Gupta are all directed to data migration systems, and thus within the same field of endeavor. It would have been obvious to have applied Gupta's disclosure above to the combination of Bobber and '417, for the purpose of allowing synchronization of later updates of a file system.

Claim 15:

Art Unit: 2167

As per “to replace SMS-simulator-generated provisioning time information with actual provisioning time information for the second SMS.”

The combination of Bober and ‘417 disclose in Bober “to replace SMS-simulator-generated” “information with actual” “information for the second SMS” [Abstract, target server changes the offline node for the object to an online node for the object].

The combination of Bober and ‘417 disclose in ‘417 “provisioning information” [0053 line 1 provisioning requests].

However, Bober and ‘417 do not explicitly disclose “time” information.

On the other hand, Gupta discloses 0038 line 7, an update stage at ever decreasing time intervals.

Bobber, ‘417, and Gupta are all directed to data migration systems, and thus within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied Gupta’s disclosure above to the combination of Bobber and ‘417, for the purpose maintaining time information in order to track updates. Thus, maintaining synchronization.

Claim 19:

The combination of Bober and ‘417 do not explicitly disclose “replays the second transaction file at a predetermined time period after replaying the first transaction file”.

On the other hand, Gupta discloses “replays the second transaction file at a predetermined time period after replaying the first transaction file” [0038, time intervals]

Bobber, '417, and Gupta are all directed to data migration systems, and thus within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied Gupta's disclosure above to the combination of Bobber and '417, for the purpose maintaining time information in order to track updates. Thus, maintaining synchronization.

Claim 25:

The combination of Bober and '417 disclose in Bober “providing the SMS simulator, wherein the SMS simulator” [col. 2 lines 49-52 and lines 56-58, target server using offline nodes]

However the combination of Bober and '417 do not explicitly disclose “is operable to record and play back data generated during a migration period.”

On the other hand, Gupta discloses logging at least one of the transactions 0036 line 5-6; and 037 lines 1-2 logged transactions are executed on target server. Accordingly, to record (logged transaction) and play back data (logged transactions executed) generated during a migration period (abstract line 2 during migration) is disclosed.

Art Unit: 2167

Bobber, '417, and Gupta are all directed to data migration systems, and thus within the same field of endeavor. It would have been obvious to have applied Gupta's disclosure above to the combination of Bobber and '417, for the purpose of allowing synchronization of later updates of a file system.

8. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6938039 by Bober et. al. (hereafter Bober) and US Patent Application Publication 20040088417 by Bober et. al. (hereafter '417) further in view of US Patent 6937993 by Gabbita et. al. (hereafter Gabbita).

Claim 6:

As to, "suppressing provisioning notification to a main billing and provisioning system during the replacing."

The combination of Bober, and '417 disclose in '417 "suppressing notification to a provisioning system during replacing" [0071, error message returned indicating that the provisioning request cannot be satisfied as specified].

However Bober and '417 do not explicitly disclose a billing system.

On the other hand, Gabbita discloses col. 6 lines 35-36 bill the purchased products and services. Accordingly, Gabbita discloses a billing system.

Bober, '417, and Gabbita are all directed to transactions for a database system. It would have been obvious to a person of an ordinary skill at the time the invention was made to have applied Gabbita's disclosure above to the combination of Bober and '417 for the purpose providing a method to bill for a particular service or request. In doing so, improves the profitability of customizing provisioning systems.

Claim 16:

As to, “wherein provisioning notification is suppressed to a main billing and provisioning system when the SMS-simulator-generated provisioning information is replaced.”

The combination of Bober, and '417 disclose in '417 “wherein provisioning notification is suppressed to a main provisioning system when the SMS-simulator-generated provisioning information is replaced” [0071, error message returned indicating that the provisioning request cannot be satisfied as specified. 0061 an automatic provisioning process that automatically provisions a computer system to satisfy the definition provided in the request. Accordingly, wherein provisioning notification is suppressed to (error message) a main provisioning system (provision) when the SMS-simulator generated provisioning information (computer system) is replaced (provision a computer system).].

However Bober and '417 do not explicitly disclose a billing system.

Art Unit: 2167

On the other hand, Gabbita discloses col. 6 lines 35-36 bill the purchased products and services. Accordingly, Gabbita discloses a billing system.

Bober, '417, and Gabbita are all directed to transactions for a database system. It would have been obvious to a person of an ordinary skill at the time the invention was made to have applied Gabbita's disclosure above to the combination of Bober and '417 for the purpose providing a method to bill for a particular service or request. In doing so, improves the profitability of customizing provisioning systems.

9. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6938039 by Bober et. al. (hereafter Bober) and US Patent Application Publication 20040088417 by Bober et. al. (hereafter '417) further in view of US Patent Application Publication 20020165724 by Blankestijn et. al. (hereafter Blankestijn).

Claim 26:

The combination of Bober and '417 do not explicitly disclose “to close the first transaction file and open the second transaction file in response to an operator command.”

On the other hand, paragraph 290 a get file function copies the file containing the net changes for the period or changes for the interval to a specified location. Further disclosing paragraph 290, a close function. Accordingly, to close the first transaction file (file containing net changes) and

Art Unit: 2167

open the second transaction file (get file...file containing net changes) in response to an operator command (function) is disclosed.

Bober, '417, and Blankestijn are all directed towards data migration systems, and are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied Blankestijn's disclosure above, to the combination of Bober and '417 for the purpose of maintaining the changes provided to a system.

Claim 27:

The combination of Bober and '417 do not explicitly disclose "to close the first transaction file and open the second transaction file at a predetermined time or at a predetermined time interval after a previous event"

On the other hand, paragraph 290 a get file function copies the file containing the net changes for the period or changes for the interval to a specified location. Further disclosing paragraph 290, a close function. Accordingly, to close the first transaction file (close) and open the second transaction file (open) at a predetermined time (file contains changes for the period) or at a predetermined time interval after a previous event.

Bober, '417, and Blankestijn are all directed towards data migration systems, and are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied Blankestijn's disclosure above, to the combination of Bober and '417 for the purpose of maintaining the changes provided to a system.

Response to Arguments

10. Applicant's arguments filed 6/19/08 have been fully considered but they are not persuasive.

Applicant's mainly assert the following with regard to the Bober reference.

A. Applicant's assert that Bober does not disclose directing each of a plurality of provisioning requests to an SMS simulator instead of to a first SMS or a second SMS, as recited in claim 1. Similarly, recited in claim 11. Further asserting all other claim limitations are not taught because the limitations of claim 1 and 11 are not disclosed.

In response, the examiner respectfully disagrees. Based on Applicant's remarks, Applicant's appear to assert that the target server is a second SMS. However, in the rejection the target server was interpreted to be the SMS simulator. Applicant's amendments do not overcome the cited references. Therefore the rejection is maintained. It is further noted that the source server 19, is not just one server but can be many. Therefore, a second SMS is also taught. Accordingly, merely amending the claim to include a second SMS does not overcome the cited reference in this regard.

Furthermore, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With respect to the claimed limitations, Bober discloses: “Directing each of the plurality of” “requests to an SMS simulator instead of to the first SMS or a second SMS;”[col. 2 lines 49-51, directing subsequent client requests to the target file server instead of the source server. Col. 2 lines 56-58, offline nodes representing file system objects that have not yet been transferred from the source file server to the target file server. Accordingly, directing (col. 2 lines 49-51, directing) each of the plurality of requests (col. 2 lines 49-51, requests) to an SMS simulator (col. 2 lines 49-52 and lines 56-58, target server using offline nodes) instead of to the first SMS (col. 2 lines 49-52, source server) or a second SMS is disclosed]

Bobber merely did not explicitly disclose “provisioning”.

On the other hand, ‘417 discloses 0053 line 1 provisioning requests. 0033 line 7, further disclosing provisioning requests can specifically identify. 0033 line 3 discloses provision a computer system in response to a provisioning request. Accordingly, a provisioning request is disclosed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have applied the disclosure of ‘417 to the disclosure of Bober for the purpose of data migration. In ‘417 paragraph 0033 lines 3-5 it states that provisioning provides a specification that defines a desired configuration for a computer system. In 0053 lines 10-14, it may be desirable to replicate an existing computer system configuration for any of numerous reasons. One particular application in which replication may be desirable is when a data migration is being performed from one storage system to another.

Conclusion

11. The prior art made of record listed on pto-892 and not relied, if any, upon is considered pertinent to applicant's disclosure.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PHAM whose telephone number is (571)272-3924. The examiner can normally be reached on 9am-5pm.

Art Unit: 2167

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. P./
Examiner, Art Unit 2167

/John R. Cottingham/
Supervisory Patent Examiner, Art Unit
2167